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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,368	05/25/2001	Leonard S. Hand	6169-202	3711

7590	09/29/2005

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EXAMINER
ZHOU, TING

ART UNIT	PAPER NUMBER
2173	

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/865,368	HAND ET AL.
	Examiner	Art Unit	
	Ting Zhou	2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 July 2005</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5,7-11,13-21,23,24,26-28,30-34,36-44 and 46* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-5, 7-11, 13-21, 23-24, 26-28, 30-34, 36-44 and 46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   The amendment filed on 7 July 2005 have been received and entered. Claims 1,

3-5, 7-11, 13-21, 23-24, 26-28, 30-34, 36-44 and 46 as amended are pending in the

application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 3-5, 7-11, 13-21, 24, 26-28, 30-34, 36-44 and 46 are rejected under 35

U.S.C. 103(a) as being unpatentable over Dev et al. U.S. Patent 5,261,044 (hereinafter

"Dev"), Petty et al. U.S. Patent 6,546,263 (hereinafter "Petty") and Chari U.S. Patent

6,046,742.

Referring to claims 1, 10, 19, 24, 33 and 42, Dev teaches a method and computer

readable storage comprising defining metrics, each of the defined metrics corresponding

to at least one entity in the dynamic data space, wherein each entity is a network

component (providing a visual display of information relating to network entities,

represented on the display by icons) (Dev: column 2, lines 46-64 and Figure 1) and

characterizing the performance of the component in a content delivery network

(providing indication, via icons, of the statuses of network entities of a computer network

in a network management system) (Dev: column 2, lines 46-64 and Figure 1); quantizing

discrete levels for each of the metrics (each of the metrics, or icons, have a plurality of

levels, or user selectable areas representing discrete parameters of the corresponding

network entity) (Dev: column 2, line 46 – column 3, line 14); assigning a unique

indicator to each of the quantized discrete levels (each of the levels, or parameters of the

displayed network entity icon has an associated unique indicator, or user-selectable

area/section of the icon) (Dev: column 2, line 46 – column 3, line 14); determining a

value for each of the defined metrics and responsively determining the unique indicator

corresponding to the value (for example, when predefined events occur in the network

entities, alarms are generated and icons determined to be representative of the entities

having an alarm are displayed , with the displayed icons having a plurality of user-

selectable areas) (Dev: column 3, lines 15-28); receiving a user selection of particular

ones of the entities via a graphical user interface (user selection of an area of the icon)

(Dev: column 3, lines 15-28), and providing graphical display representations of the

unique indicators associated with the selected entities within a graphical user interface of

a machine remotely located from the at least one entity, the graphical interface changing

to reflect changes to the selections (displaying icons representative of network entities,

the icons displayed having a plurality of user-selectable areas representing entity

parameters; as the users select different areas of the icon, the corresponding detailed

information is provided on the display; the graphical user interface manages a remotely

located network via receiving network information from the virtual network machines)

(Dev: column 2, line 46 – column 3, line 14, column 4, lines 1-33 and Figure 1).

Dev fails to explicitly teach defining a maximum and a minimum value for each

of the metrics and that the quantized discrete levels are between the defined maximum

and the defined minimum values. Petty teaches an interface displaying icons

representing the statuses of operating parameters (Petty: column 1, lines 38-46) similar to

that of Dev. In addition, Petty further teaches defining a maximum and minimum value

for each of the metrics (using the battery icon and signal strength icon for example, there

is a maximum value of full charge and minimum value of not charged for the battery icon

and similarly, for the signal strength icon, there is a maximum value of full signal

strength and minimum value of unsatisfactory signal strength) (Petty: column 4, lines 14-

24 and 32-42); quantizing discrete levels between the defined maximum and the defined

minimum value (discrete degrees of values for the icons; for example, for the battery

status icon, there are discrete levels such as ¾ charge, ½ charge and ¼ charge) (Petty:

column 4, lines 14-24 and 32-42); assigning a unique indicator to each of the quantized

discrete levels; determining a value for each of the defined metrics and responsively

determining the unique indicator corresponding to the value (determining a display

representing each of the levels of values of the icons and displaying the icons

accordingly) (Petty: column 4, lines 14-24 and column 7, lines 50-65); receiving a

selection of particular ones of the entities via a graphical user interface, and providing

graphical display representations of the unique indicators associated with the selected

entities, the graphical interface changing to reflect changes to the selections (upon

receiving status changes of the operating condition, the appropriate icon is selected by the

GUI application and provided on the display) (Petty: column 8, lines 40-67 and column 9,

lines 1-20). This is further recited in column 12, lines 34-51. It would have been obvious

to one of ordinary skill in the art, having the teachings of Dev and Petty before him at the

time the invention was made, to modify the network managing interface for displaying

icons representative of network components taught by Dev to include the plurality of

displayed discrete levels between a defined maximum and minimum threshold of Petty.

One would have been motivated to make such a combination in order to allow users to

easily ascertain status information and see the degrees of a system parameter, thereby

enabling users to gauge approximately how severe or urgent a parameter status is; for

example, by displaying icons with discrete degrees of parameter values, users can easily

determine whether a network component will run out of battery soon or whether a

network component is about to lose connection signal, allowing them to take the

appropriate actions as the demand occurs.

However, although Dev and Petty teach displaying the relationship between

network components, Dev and Petty fail to explicitly teach displaying within one section

of the graphical user interface, the graphical display representations in a manner as to

illustrate relative communication relationships between the network components being

monitored and simultaneously displaying within another section of the graphical user

interface the determined values of the defined metrics associated with the selected

entities. Chari teaches the management and display of information regarding components

in a computer network similar to that of Dev and Petty. In addition, Chari further teaches

displaying within one section of the graphical user interface, the graphical display

representations in a manner as to illustrate relative communication relationships between

the network components being monitored and simultaneously displaying within another

section of the graphical user interface the determined values of the defined metrics

associated with the selected entities (for example, as shown in Figure 14, the graphical

user interface simultaneously displays the relationships between the different network

components in a hierarchical fashion on the left side of the interface, and the values for

the selected component on the right side of the interface; as another example, Figure 15

shows the simultaneous display of the component relationships on the left side of the

interface and the determined values, i.e. "DIMM Number 1" – "DIMM Number 8" of the

selected "DIMM's" component on the right side of the interface). It would have been

obvious to one of ordinary skill in the art, having the teachings of Dev, Petty and Chari

before him at the time the invention was made, to modify the network component

management interface of Dev and Petty to include the simultaneous display of the

relative relationships between network components and the determined values for the

selected component taught by Chari. One would have been motivated to make such a

combination in order to provide users with a quick view of and access to a complete set

of information concerning a network, thus improving performance time.

Referring to claims 3, 13, 21, 26, 36 and 44, Dev, as modified, teach the assigning

step comprises designating a user configurable unique indicator selected from the group

consisting of a different color, a different shade and a different pattern to each of the

quantized discrete levels (Petty: column 4, lines 32-42 and Figures 1A-1C).

Referring to claims 4, 14, 27 and 37, Dev, as modified, teach monitoring the at

least one entity with at least one software agent remotely located from a machine upon

which the graphical user interface resides and the software agent interrogating each entity

within the dynamic data space for the determined value (monitoring the network with the

virtual network machine which contains a software representation of the network being

managed, the virtual network machine receives data from the network devices via a

device communication manager) (Dev: column 4, lines 2-33) (the network can contain

many servers connected to the network, and each network is represented by a SNMP

agent, which is a software agent, that acts as an intermediary between the server

components and the network; the SNMP agent receives requests for data from the SNMP

manager, retrieves the corresponding data, and displays it on the display map; the data

could be one of the plurality of operational parameters about different components in the

network) (Chari: column 2, lines 3-14, column 6, line 62 - column 7, line 25, column 9,

lines 34-42 and column 13, lines 24-37).

Referring to claims 5 and 28, Dev, as modified, teach automatically updating the

graphical display representations of the selected ones of the determined values in the

graphical user interface (automatically updating the network information models as status

information changes) (Dev: column 5, lines 33-40 and column 7, lines 54-59).

Referring to claims 7, 17, 30 and 40, Dev, as modified, teach the selected ones of

the metrics are selected from a list of metrics displayed within the graphical user interface

(selecting a metric, or icon, from a list of metrics, or a plurality of displayed icons on the

display) (Dev: column 2, lines 46-64, column 13, lines 30-66 and further shown in

Figures 7A-7C and 8A-8C).

Referring to claims 8, 15, 31 and 38, Dev, as modified, teach updating the

graphical representations dynamically based upon subsequent value determinations

(updating the display of status icons to reflect changes to the operating conditions, such

as changing battery power and signal strength) (Petty: column 8, lines 40-67, column 9,

lines 1-20 and column 12, lines 34-51).

Referring to claims 9, 18, 32 and 41, Dev, as modified, teach the step of

determining the value and the providing step are configurably periodic (polling network

devices periodically, at specified time intervals) (Dev: column 6, lines 44-48, column 9, lines 42-50 and column 14, lines 60-63).

Referring to claims 11, 20, 34 and 43, Dev, as modified, teach the defined metrics are selected from the group consisting of CPU load, run queue size, memory usage, connections, and disk I/O usage (CPU load, run queue size, memory usage, connections and disk I/O usage are all status indicating performance parameters of a networked system and Dev teach the displayed icons representing performance parameters indicating the statuses of network entities, as recited in column 3, lines 1-14 and Petty teach the defined status indicating icons of network components could include icons indicating network connections, memory, or battery usage, etc., as recited in column 3, line 54 – column 4, line 59).

Referring to claims 16 and 39, Dev, as modified, teach providing a graphical representation of each one of the components, each one of the components represented by a node in the graphical display (the components, or network entities of a computer network are graphically represented on the display by a node or icon) (Dev: column 2, lines 46-64).

Referring to claim 46, Dev, as modified, teach the maximum and minimum values (using the battery icon and signal strength icon for example, there is a maximum value of full charge and minimum value of not charged for the battery icon and similarly, for the signal strength icon, there is a maximum value of full signal strength and minimum value of unsatisfactory signal strength) (Petty: column 4, lines 14-24 and 32-42) are user configurable values (the interface of Dev teaches the ability for users to configure the

network management display via selecting different components to view and editing

model relations) (Dev: column 4, lines 34-57 and column 10, lines 21-40).

3.   Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jain et al.

U.S. Patent 6,225,999 (hereinafter "Jain") and Petty et al. U.S. Patent 6,546,263

(hereinafter "Petty") and Chari U.S. Patent 6,046,742.

Referring to claim 23, Jain teaches a system comprising plurality of software

agent for retrieving values for metrics from the components within a heterogeneous CDN

(agents at various nodes of the network report information to the management process in

the managing station) (Jain: column 4, line 17 – column 5, line 11 and column 7, lines

34-45), a processor remotely located from the software agents for determining a user

configurable graphical representation for each of the retrieved values (the agent sends

information to the remotely located managing process on the managing station 16) (Jain:

column 4, line 17 – column 5, line 11 and column 7, lines 34-45 and Figure 2), a

graphical user interface of a machine remotely located from at least one of the

components for presenting the determined graphical representation (providing a graphical

user interface for displaying remotely located network components, such as routers and

bridges, for display on a topological map) (Jain: column 2, lines 41-61, column 4, lines

17-57 and Figure 1), the graphical user interface having a user-selectable list of the

metrics, the graphical user interface changing to reflect changes to the selections (users

can navigate through the topological map of network components to obtain a view of

selected components and their connections on the GUI) (Jain: column 7, line 64 – column

8, line 37).

Jain fails to explicitly teach different graphical representations are determined for

different quantized ranges of the retrieved values. Petty teaches an interface displaying

icons representing the statuses of operating parameters (Petty: column 1, lines 38-46)

similar to that of Jain. In addition, Petty further teaches determining different graphical

representations for different quantized ranges of the retrieved values (displaying discrete

degrees of values for the icons; for example, for the battery status icon, there are discrete

levels such as ¾ charge, ½ charge and ¼ charge) (Petty: column 4, lines 14-24 and 32-

42). This is further recited in column 12, lines 34-51. It would have been obvious to one

of ordinary skill in the art, having the teachings of Jain and Petty before him at the time

the invention was made, to modify the network managing interface for displaying icons

representative of network components taught by Jain to include the display of a plurality

of quantized ranges of values of Petty. One would have been motivated to make such a

combination in order to allow users to easily ascertain status information and see the

degrees of a system parameter, thereby enabling users to gauge approximately how

severe or urgent a parameter status is; for example, by displaying icons with discrete

degrees of parameter values, users can easily determine whether a network component

will run out of battery soon or whether a network component is about to lose connection

signal, allowing them to take the appropriate actions as the demand occurs.

However, Jain and Petty fail to explicitly teach wherein the graphical user

interface includes a first display section for displaying the determined graphical

representation in a manner as to illustrate relative communication relationships between

the components within the heterogeneous CDN, and wherein the graphical user interface

includes a second display section that is simultaneously displayed with the first display

section, the second display section displaying the retrieved values. Chari teaches the

management and display of information regarding components in a computer network

similar to that of Jain and Petty. In addition, Chari further teaches the graphical user

interface includes a first display section for displaying the determined graphical

representation in a manner as to illustrate relative communication relationships between

the components within the heterogeneous CDN, and wherein the graphical user interface

includes a second display section that is simultaneously displayed with the first display

section, the second display section displaying the retrieved values (for example, as shown

in Figure 14, the graphical user interface simultaneously displays the relationships

between the different network components in a hierarchical fashion on the left side of the

interface, and the determined values for the selected component on the right side of the

interface; as another example, Figure 15 shows the simultaneous display of the

component relationships on the left side of the interface and the determined values, i.e.

"DIMM Number 1" – "DIMM Number 8" of the selected "DIMM's" component on the

right side of the interface). It would have been obvious to one of ordinary skill in the art,

having the teachings of Jain, Petty and Chari before him at the time the invention was

made, to modify the network component management interface of Jain and Petty to

include the simultaneous display of the relative relationships between network

components and the determined values for the selected component taught by Chari. One

would have been motivated to make such a combination in order to provide users with a

quick view of and access to a complete set of information concerning a network, thus

improving performance time.

Response to Arguments

4.   Applicant's arguments with respect to claims 1, 3-5, 7-11, 13-21, 23-24, 26-28,

30-34, 36-44 and 46 have been considered but are moot in view of the new ground(s) of

rejection.

5.   The applicant argues that Dev teaches a hierarchical decomposition of display

layers, while the applicants claim a planar approach and therefore, modifying Dev to

simultaneously display a first and second section in the manner claimed, would contradict

Dev's teachings. The examiner respectfully disagrees. As the applicant states, Dev

teaches a hierarchical display of layers of the network; similarly, Chari also displays a

hierarchal display of levels of the network, which can be decomposed by expanding the

hierarchical levels. In addition, Chari further teaches the display of a second section next

to the hierarchical display for displaying details such as the values of the selected

component. Therefore, adding a second, or additional display next to the first

hierarchical display of layers or levels is not contradictory, but well known in the art;

Chari provides the motivation that such an additional displayed section allows a quick

view of and access to a complete set of information concerning a network, thereby

improving performance time.

6.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than

SIX MONTHS from the date of this final action.
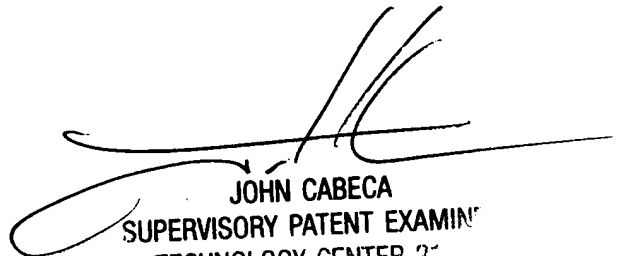
Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ting Zhou whose telephone number is (571) 272-4058.

The examiner can normally be reached on Monday - Friday 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Cabeca can be reached at (571) 272-4048. The fax phone number for

the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the

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Center (EBC) at 866-217-9197 (toll-free).

TZ

JOHN CABECA
SUPERVISORY PATENT EXAMIN'
TECHNOLOGY CENTER 2'